

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

## Refine Search

### Search Results -

Terms	Documents
L11 and (updat\$ or modif\$) near4 (program\$ or modul\$ or code\$) near8 (hardware\$)	121

**Database:**

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

**Search:**

L12	<input type="button" value="Refine Search"/>	
<input type="button" value="Recall Text"/>	<input type="button" value="Clear"/>	<input type="button" value="Interrupt"/>

### Search History

DATE: Friday, June 25, 2004 [Printable Copy](#) [Create Case](#)

<u>Set</u>	<u>Name</u>	<u>Query</u>	<u>Hit Count</u>	<u>Set Name</u>
side by side				result set
DB=USPT; PLUR=YES; OP=ADJ				
L12	L11 and (updat\$ or modif\$) near4 (program\$ or modul\$ or code\$) near8 (hardware\$)		121	<u>L12</u>
L11	L10 and (modul\$ or program\$ or code\$) near5 hardware\$		1236	<u>L11</u>
L10	L9 and execut\$		1859	<u>L10</u>
L9	L8 and (program\$ or modul\$ or code\$ or software\$) near5 ((hardware\$) or (device driver\$))		2150	<u>L9</u>
L8	L7 and (updat\$ or modif\$ or chang\$ or alter\$) near4 (program\$ or modul\$ or code\$ or software\$)		2838	<u>L8</u>
L7	(detect\$ near5 ((hardware\$) or device driver\$))		6761	<u>L7</u>
L6	L5 and ( hard\$ or device\$)		1	<u>L6</u>
L5	6442754.pn.		1	<u>L5</u>
L4	L3 and (hard\$ or device\$)		1	<u>L4</u>
L3	5732275.pn.		1	<u>L3</u>

<u>L2</u>	L1 and (graphic\$ or parallel\$ or asynch\$)	1	<u>L2</u>
<u>L1</u>	4928247.pn.	1	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
(707/10).ccls.	3065

**Database:**

US Pre-Grant Publication Full-Text Database
US Patents Full-Text Database
US OCR Full-Text Database
EPO Abstracts Database
JPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

**Search:**

L14
-----

### Search History

DATE: Friday, June 25, 2004 [Printable Copy](#) [Create Case](#)

<u>Set</u>	<u>Hit</u>	<u>Set</u>
<u>Name</u>	<u>Count</u>	<u>Name</u>
side by		result
side		set
DB=USPT; PLUR=YES; OP=ADJ		
L14 707/10.ccls.	3065	L14
L13 707/104.1.ccls.	2184	L13
L12 709/201,202.ccls.	1588	L12
DB=TDBD; PLUR=YES; OP=ADJ		
(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$)		
L11 near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device	0	L11
driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$)		
DB=DWPI; PLUR=YES; OP=ADJ		
(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$)		
L10 near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device	0	L10
driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$)		
DB=JPAB; PLUR=YES; OP=ADJ		
(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$)		

<u>L9</u> near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$) <i>DB=EPAB; PLUR=YES; OP=ADJ</i>	0	<u>L9</u>
<u>L8</u> near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$) <i>DB=PGPB; PLUR=YES; OP=ADJ</i>	0	<u>L8</u>
<u>L7</u> near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$) <i>DB=USPT; PLUR=YES; OP=ADJ</i>	4	<u>L7</u>
<u>L6</u> l4 and (cop\$ near4 source near4 target\$)	0	<u>L6</u>
<u>L5</u> L4 and response\$ near5 detect\$ near4 (hardware\$ or device driver\$)	18	<u>L5</u>
<u>L4</u> l2 and (detect\$ near4 (hardware or device driver\$))	414	<u>L4</u>
<u>L3</u> L2 and l1	36	<u>L3</u>
<u>L2</u> (updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$) near4 (hardware\$ or device driver\$)	4884	<u>L2</u>
<u>L1</u> 717/168,169,171,172,173.ccls.	425	<u>L1</u>

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
(707/10).ccls.	3065

**Database:**

- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database**
- US OCR Full-Text Database
- EPO Abstracts Database
- JPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

**Search:**

### Search History

**DATE:** Friday, June 25, 2004 [Printable Copy](#) [Create Case](#)

<u>Set</u>	<u>Hit Count</u>	<u>Set</u>
<u>Name</u>	<u>Query</u>	<u>Name</u>
side by side		result set
DB=USPT; PLUR=YES; OP=ADJ		
<u>L14</u> 707/10.cccls.	3065	<u>L14</u>
<u>L13</u> 707/104.1.cccls.	2184	<u>L13</u>
<u>L12</u> 709/201,202.cccls.	1588	<u>L12</u>
DB=TDBD; PLUR=YES; OP=ADJ		
L11 (updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$)	0	<u>L11</u>
near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$)		
DB=DWPI; PLUR=YES; OP=ADJ		
L10 (updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$)	0	<u>L10</u>
near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$)		
DB=JPAB; PLUR=YES; OP=ADJ		
(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$)		

<u>L9</u>	near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$) <i>DB=EPAB; PLUR=YES; OP=ADJ</i>	0	<u>L9</u>
<u>L8</u>	(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$) near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$) <i>DB=PGPB; PLUR=YES; OP=ADJ</i>	0	<u>L8</u>
<u>L7</u>	(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$) near4 (hardware\$ or device driver\$)and (detect\$ near4 (hardware or device driver\$)) and response\$ near5 detect\$ near4 (hardware\$ or device driver\$) <i>DB=USPT; PLUR=YES; OP=ADJ</i>	4	<u>L7</u>
<u>L6</u>	l4 and (cop\$ near4 source near4 target\$)	0	<u>L6</u>
<u>L5</u>	L4 and response\$ near5 detect\$ near4 (hardware\$ or device driver\$)	18	<u>L5</u>
<u>L4</u>	l2 and (detect\$ near4 (hardware or device driver\$))	414	<u>L4</u>
<u>L3</u>	L2 and l1	36	<u>L3</u>
<u>L2</u>	(updat\$ or modif\$ Or chang\$ or alter\$) near4 (program\$ or software\$ or code\$) near4 (hardware\$ or device driver\$)	4884	<u>L2</u>
<u>L1</u>	717/168,169,171,172,173.ccls.	425	<u>L1</u>

END OF SEARCH HISTORY



## Welcome to IEEE Xplore®

- Home
- What Can I Access?
- Log-out

## Tables of Contents

- Journals & Magazines
- Conference Proceedings
- Standards

## Search

- By Author
- Basic
- Advanced

## Member Services

- Join IEEE
- Establish IEEE Web Account
- Access the IEEE Member Digital Library

 Print Format

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)
[Search: The ACM Digital Library](#) [The Guide](#)


**THE ACM DIGITAL LIBRARY**
[Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Terms used

hardware and detect and update and module and source and target

Found 45,102 of 138,663

Sort results  
by
 
 Save results to a Binder

[Try an Advanced Search](#)
Display  
results
 
 Search Tips

[Try this search in The ACM Guide](#)
 Open results in a new  
window

Results 81 - 100 of 200

Result page: previous

[1](#) [2](#) [3](#) [4](#) **5** [6](#) [7](#) [8](#) [9](#) [10](#) [next](#)

Best 200 shown

### 81 Debugging concurrent programs

Charles E. McDowell, David P. Helmbold

December 1989 **ACM Computing Surveys (CSUR)**, Volume 21 Issue 4Full text available: [pdf\(2.86 MB\)](#)Additional Information: [full citation](#), [abstract](#), [references](#), [citations](#), [index terms](#), [review](#)

The main problems associated with debugging concurrent programs are increased complexity, the "probe effect," nonrepeatability, and the lack of a synchronized global clock. The probe effect refers to the fact that any attempt to observe the behavior of a distributed system may change the behavior of that system. For some parallel programs, different executions with the same data will result in different results even without any attempt to observe the behavior. Even when the behavior can be ...

### 82 A design flow for partially reconfigurable hardware

Ian Robertson, James Irvine

May 2004 **ACM Transactions on Embedded Computing Systems (TECS)**, Volume 3 Issue 2Full text available: [pdf\(698.30 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

This paper presents a top-down designer-driven design flow for creating hardware that exploits partial run-time reconfiguration. Computer-aided design (CAD) tools are presented, which complement conventional FPGA design environments to enable the specification, simulation (both functional and timing), synthesis, automatic placement and routing, partial configuration generation and control of partially reconfigurable designs. Collectively these tools constitute the dynamic circuit switching CAD f ...

**Keywords:** FPGA, Viterbi decoder, configuration control, dynamically reconfigurable logic (DRL), power estimation, run-time reconfiguration (RTR)

### 83 Session 1 (full technical papers): evolution in source code: A method for detecting faulty code violating implicit coding rules

Tomoko Matsumura, Akito Monden, Ken-ichi Matsumoto

May 2002 **Proceedings of the international workshop on Principles of software evolution**Full text available: [pdf\(413.00 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

In the field of legacy software maintenance, there unexpectedly arise a large number of


[Subscribe \(Full Service\)](#) [Register \(Limited Service, Free\)](#) [Login](#)
 The ACM Digital Library  The Guide



## THE ACM DIGITAL LIBRARY


[Feedback](#) [Report a problem](#) [Satisfaction survey](#)

Terms used

hardware and detect and update and module and source and target and modify and module
Found 48,313  
of 138,663Sort results  
by
 
 Save results to a Binder

[Try an Advanced Search](#)
Display  
results
 
 Search Tips

[Try this search in The ACM Guide](#)
 Open results in a new window

Results 181 - 200 of 200

Result page: [previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [6](#) [7](#) [8](#) [9](#) **10**

Best 200 shown

Relevance scale      

### 181 Enabling trusted software integrity

Darko Kirovski, Milenko Drinić, Miodrag Potkonjak

October 2002 **Proceedings of the 10th international conference on Architectural support for programming languages and operating systems**, Volume 37, 30 , 36 Issue 10 , 5 , 5Full text available: [pdf\(1.39 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

Preventing execution of unauthorized software on a given computer plays a pivotal role in system security. The key problem is that although a program at the beginning of its execution can be verified as authentic, while running, its execution flow can be redirected to externally injected malicious code using, for example, a buffer overflow exploit. Existing techniques address this problem by trying to detect the intrusion at run-time or by formally verifying that the software is not prone to a p ...

### 182 The design of a portable scientific tool: a case studying using SnB

Steven M. Gallo, Russ Miller, Charles M. Weeks

November 1996 **Proceedings of the 1996 ACM/IEEE conference on Supercomputing (CDROM)**Full text available: [pdf\(278.57 KB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#), [index terms](#)

Developing and maintaining a large software package is a complex task. Decisions are made early in the design process that affect i) the ability of a user to effectively exploit the package and ii) the ability of a software engineer to maintain it. This case study discusses issues in software development and maintainability of a scientific package called SnB, which is used to determine molecular crystal structures. The design of the user interface is discussed along with important software ...

### 183 Posters & demos: Using multimodal interaction to navigate in arbitrary virtual VRML worlds

Frank Althoff, Gregor McGlaun, Björn Schuller, Peter Morguet, Manfred Lang

November 2001 **Proceedings of the 2001 workshop on Perceptive user interfaces**Full text available: [pdf\(1.82 MB\)](#) Additional Information: [full citation](#), [abstract](#), [references](#)

In this paper we present a multimodal interface for navigating in arbitrary virtual VRML worlds. Conventional haptic devices like keyboard, mouse, joystick and touchscreen can freely be combined with special Virtual-Reality hardware like spacemark, data glove and position tracker. As a key feature, the system additionally provides intuitive input by command and natural speech utterances as well as dynamic head and hand gestures. The



## Welcome to IEEE Xplore®

- Home
- What Can I Access?
- Log-out

## Tables of Contents

- Journals & Magazines
- Conference Proceedings
- Standards

## Search

- By Author
- Basic
- Advanced

## Member Services

- Join IEEE
- Establish IEEE Web Account
- Access the IEEE Member Digital Library

 Print Format

Your search matched **4** of **1046194** documents.  
A maximum of **500** results are displayed, **15** to a page, sorted by **Relevance Descending** order.

## Refine This Search:

You may refine your search by editing the current search expression or enter a new one in the text box.


 Check to search within this result set

## Results Key:

**JNL** = Journal or Magazine **CNF** = Conference **STD** = Standard

---

**1 A low-cost dynamic range-finding device based on amplitude-modulated continuous ultrasonic wave**

*Hong Hua; Yongtian Wang; Dayuan Yan;*  
Instrumentation and Measurement, IEEE Transactions on, Volume: 51, Issue: 2, April 2002  
Pages:362 - 367

[\[Abstract\]](#) [\[PDF Full-Text \(261 KB\)\]](#) **IEEE JNL**

---

**2 A time redundancy approach to TMR failures using fault-state likelihood**

*Shin, K.G.; Hagbae Kim;*  
Computers, IEEE Transactions on, Volume: 43, Issue: 10, Oct. 1994  
Pages:1151 - 1162

[\[Abstract\]](#) [\[PDF Full-Text \(996 KB\)\]](#) **IEEE JNL**

---

**3 Optical hardware backpropagation neural network**

*Skinner, S.R.; Steck, J.E.; Cruz-Cabrera, A.A.; Mingtao Yang; Behrman, E.C.,*  
Neural Networks, 1999. IJCNN '99. International Joint Conference on, Volume: 4, 10-16 July 1999  
Pages:2351 - 2356 vol.4

[\[Abstract\]](#) [\[PDF Full-Text \(396 KB\)\]](#) **IEEE CNF**

---

**4 Road and relative ego-state recognition**

*Behringer, R.; V. Holt, V.; Dickmanns, D.;*  
Intelligent Vehicles '92 Symposium., Proceedings of the, 29 June-1 July 1992  
Pages:385 - 390

[\[Abstract\]](#) [\[PDF Full-Text \(568 KB\)\]](#) **IEEE CNF**

---

[Home](#) | [Log-out](#) | [Journals](#) | [Conference Proceedings](#) | [Standards](#) | [Search by Author](#) | [Basic Search](#) | [Advanced Search](#) | [Join IEEE](#) | [Web Account](#) | [New this week](#) | [OPAC Linking Information](#) | [Your Feedback](#) | [Technical Support](#) | [Email Alerting](#) | [No Robots Please](#) | [Release Notes](#) | [IEEE Online Publications](#) | [Help](#) | [FAQ](#) | [Terms](#) | [Back to Top](#)

Copyright © 2004 IEEE — All rights reserved